CDM

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Mr. Paul Peronard, U.S. Environmental Protection Agency
Libby Asbestos Site Team Leader

Ms. Katherine Hernandez, U.S. Environmental Protection Agency
Remedial Project Manager

Mr. Mark Raney, John A. Volpe Center National Transportation Systems Center
Task Order Contracting Officer's Technical Representative

Subject: Draft Data Gap Analysis for Potential Contaminated Media, Former Stimson Lumber Site, Operable Unit 5

Dear Mr. Peronard, Ms. Hernandez, and Mr. Raney:

The purpose of this letter is to present data gaps between investigations already conducted and information needed to support a risk assessment and remedial investigation (RI) specific to the Stimson Lumber Site, Operable Unit (OU) 5. The data gaps were determined by reviewing all existing data for the site as presented in the Data Summary Report (DSR) for OU5 and comparing the data set to the conceptual site model (CSM), Figure 1. It is recommended that the data gaps identified and discussed be addressed as part of completing the risk assessment and RI for OU5.

In addition to the data gaps discussed in this analysis, an initial soils data gap analysis was previously completed for OU5. A sampling and analysis plan was developed to gather soil data required to fill the initial soil data gap identified. The soil sampling effort is currently scheduled to be completed in October 2007.

The CSM for OU5 (Figure 1) identifies several potential exposure pathways resulting in nine contaminated media of concern:

- Outdoor air near structural fire location
- Air in attic or near other unenclosed vermiculite
- Indoor air near breached walls

- Outdoor air near roads and rail spurs within OU5
- Indoor air (on-site buildings)
- Dust in air of vehicles
- Outdoor air near disturbed soil, wood chip piles, and waste bark piles
- General (ambient) outdoor air
- Dust in air from disturbances of roofing or other outdoor surfaces

This memorandum is organized to identify data gaps by the nine media of concern.

Outdoor Air near Structural Fire Location

Outdoor air near structural fire locations has not been evaluated specific to potential exposures at OU5. All bulk vermiculite insulation has been removed from all on-site buildings. It is suspected that only remnants remain in the walls of the central maintenance building. Sources for this pathway are currently thought to be limited at the site, and therefore additional sample collection to evaluate this media of concern specific to OU5 are not warranted at this time.

Air in Attic or near Other Unenclosed Vermiculite

Air in attics or near other unenclosed areas of vermiculite has not been evaluated specific to potential exposures at OU5. As mentioned above, the only vermiculite insulation at the site are remnants that remain in the walls of the central maintenance building. Sources for this pathway are currently thought to be limited at the site, and therefore additional sample collection to evaluate this media of concern specific to OU5 are not warranted at this time.

Indoor Air near Breached Walls

Indoor air near breached walls has not been evaluated specific to potential exposures at OU5.The only vermiculite insulation at the site is remnants that remain in the walls of the central maintenance building. Sources for this pathway are currently thought to be limited at the site, and therefore additional sample collection to evaluate this media of concern specific to OU5 are not warranted at this time.

Outdoor Air near Roads and Rail Spurs within OU5

Outdoor air near roads and rail spurs within OU5 has not been evaluated specific to potential exposures at OU5. The roads and rail spurs within OU5 are currently used daily, and therefore exposure to this media of concern is ongoing at the site. Additional sampling should be considered to evaluate this media of concern specific to OU5.

Indoor Air (On-Site Buildings)

Indoor air has been evaluated in a past sampling event using personal and stationary (indoor and outdoor) air monitoring in 2002. This information is summarized in the Final DSR for OU5 (CDM 2007). Because the use and/or configuration of many of the site buildings has changed since the 2002 sampling event was conducted, an indoor air sampling program is currently being designed by EPA to collected information related to this media of concern.

Dust in Air of Vehicles

Air in vehicles has not been evaluated specific to potential exposures at OU5. Exposure to this media of concern is likely and therefore sampling to evaluate this specific media of concern should be considered either specific to OU5 or in conjunction with studies related to other operable units.

Outdoor Air near Disturbed Soil, Wood Chip Piles, and Waste Bark Piles

Outdoor air near disturbed soils is a media of concern that has been evaluated with a limited sampling effort at OU5. In 2005, two locations within OU5 were sampled as part of the SQAPP sampling activities. During this event, one location with trace amounts of LA and one location with non-detect levels of LA were included in an ABS sampling activity. To supplement this data set it is recommended that the current data being generate from the OU4 outdoor ABS activities be used as a surrogate data source for this exposure pathway.

Outdoor air near disturbed wood chip and waste bark piles will be evaluated as described in the current initial soils gap SAP. The current initial soil data gap SAP calls for the collection of personal air samples from the excavator operator and the sample collection personnel. These samples are opportunistic in nature and are intended to provide an understanding of the range of exposures associated with this activity.

General Outdoor Ambient Air

Information from the current outdoor ambient air program, initiated in October 2006 and scheduled to be completed in October 2008, will fill the data gap for determining outdoor ambient air exposures. Therefore, additional sample collection is not recommended specific to this data gap.

Dust in Air near Disturbances of Roofing or Other Outdoor Surfaces

Air near disturbances of roofing or other outdoor surface has not been completed specific to OU5. Exposure to this media of concern is likely and therefore sampling to

evaluate this specific media of concern should be considered either specific to OU5 or in conjunction with studies related to other operable units.

Summary

The following table summarizes each of the nine media of concern discussed above and indicates if a data gap currently exists specific to OU5 for each media.

Media of Concern	Current Data Sufficient to Determine Exposure (Yes/No)	Additional Sampling Recommended (Yes/No)	Comments
Outdoor air near structural fire location	No	No	Source of media limited within OU5
Air in attic or near other unenclosed vermiculite	No	No	Source of media limited within OU5
Indoor air near breached walls	No	No	Source of media limited within OU5
Outdoor air near roads and rail spurs within OU5	No	Yes	
Indoor air (on-site buildings)	No	Yes	Current sampling plan for evaluation is underdevelopment
Dust in air of vehicles	No	Yes	
Outdoor air near disturbed soil, wood chip piles, and waste bark piles	No	Yes	Sampling event currently planned for October 2007 to collect samples for evaluation of this media of concern
General (ambient) outdoor air	No	Yes	Outdoor ambient air monitoring program currently on-going to collection samples for evaluation of this media of concern
Dust in air from disturbances of roofing or other outdoor surfaces	No	Yes	

If you have any questions or concerns, please feel free to contact me at (720) 264-1121.

Very truly yours,

Dee Warren

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Sources

Release and Transport Pathways

Contaminated Media

Receptor and Exposure Location (Current and Hypothetical Future)

Commercial Worker		Tradesperson		Recreational Visitor		Resident
Current	Future	Current	Future	Current	Future	Future

Mine site

Stockpiling and staging for distribution

Vermiculite and/or Vermiculite Concentrate and/or Mine Waste

Product (vermiculite)

Spills

Indoor insulation

Spillage along highways, rail lines

Structural fires

Outdoor air near fire location — ? ? ? ? ? ? ?

Unenclosed (onsite building) (e.g., attic spaces, crawl spaces, etc.)

Air in attic or near other unenclosed vermiculite — ● ● ● ●

Enclosed (onsite building) (e.g., walls)

Indoor air near breached walls — ● ● ● ●

Contaminated soil along roads and rail spurs in OU5

Outdoor air near highways and rail lines — ● ● ● ●

Banks of Libby Creek adjacent to OU5

Transfer via clothing/shoes

Indoor dust (onsite building)

Airborne release

Mixing

Indoor air (onsite building) — ● ● ? ? ●

Deposition

Airborne release

carpeting, interior furnishings

Surface water runoff

Transfer via clothing/shoes

Dust in vehicles

Airborne release

Dust in air of vehicles — ? ? ? ? ? ? ?

Transfer via clothing/shoes

Airborne release

Outdoor surface soil (and subsurface soil if disturbed)

Transfer via clothing/shoes

Airborne release

Outdoor air near disturbed soil, wood chip piles, and waste bark — ● ● ● ● ● ● ●

Airborne release

Airborne release

General (ambient) outdoor air — ● ● ● ● ● ● ●

Deposition

Wood Chip and Waste Bark Piles

Airborne release

Deposition

Tree bark (multiple OUs)

Burning

Ash (multiple OUs)

Deposition

Inhalation of dust in air from disturbances of roofing or other outdoor surfaces — ? ? ? ?

Historic and current airborne releases

Deposition

Deposition

Building roofs and surfaces

Deposition

KEY

●	Pathway is complete and exposure may be significant; quantitative evaluation is warranted
O	Pathway is complete but is believed to be minor in comparison to other pathways; qualitative evaluation is warranted
?	Pathway may be complete but magnitude of exposure is uncertain; further investigation may be necessary
	Pathway is incomplete or believed to be negligible; further evaluation is not warranted

Figure 1
CONCEPTUAL SITE MODEL FOR INHALATION EXPOSURES TO ASBESTOS
Stimson Lumber Company, OU5

Libby Asbestos Project
Libby, Montana

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